REMARKS:

In the outstanding Office Action, claims 1-6 and 8-33 were rejected. Claim 7 remains cancelled. The outstanding rejections are traversed below. Thus, claims 1-6 and 8-33 are pending and under consideration.

INTERVIEW WITH EXAMINER:

An interview was held on August 18, 2004 at which time the invention, U.S. Patent No. 6,008,822 ('822) and U.S. Patent No. 5,809,240 ('240) were discussed.

As discussed with the Examiner, the claims of present invention can be divided into several groups. The Group 1 claims 1-6, 29, 32 and 33 emphasize that a display is produced for a plurality of devices where each device displays a portion of the divided image and a "reference image" corresponding to the original undivided image (see also, FIG. 32 of the present application). The Group 2 claims 8-22, 25, 27 and 30 emphasize dividing processing of images (layers) between processing devices where the processing devices also receive "time series information" concerning a moving picture images (layers). As pointed out to the Examiner during the interview, the display of a layer (frame of a movie) along with the time series data (other movie frames) is shown in FIG. 23 of the present application. This enables a user editing the image portion or the layer to not only view what the user is editing but also view the portion being edited in context. For example, the user views an entire image and also where the portion being edited fits into the entire image.

Further, claim Group 3 including claims 15 and 16, call for distributing divided images, divided into portions or areas and into layers allowing layer images, such as motion pictures, to be edited in portions or pieces. The Group 4 claims 23, 24, 26, 28 and 31 call for transmitting the divided images when requested or at predetermined intervals.

REJECTION OF CLAIMS 1-6, 29, 32 and 33:

With respect to Group 1, particularly claim 1, the Examiner asserted that col. 7, line 61 - col. 8, line 39 of '822 discloses, "... providing a reference image corresponding to a target image to be displayed on the image generation devices." As discussed with the Examiner, this does not appear to be correct. This portion of '822 particularly states:

> Incidentally, the application of the present system does not particularly limit the construction of the system for accomplishing the parallel processing. In other words, either one, or both, of a single processor and a multi-processor may be used as the processor as in the present embodiment, or a tightly-coupled system using one multi-processor or a massively parallel processor may also be used.

CPUs other than those of the servers and the hardwares need not be provided to the system, and the system can be constituted by the existing system construction.

Next, the flow of the operations for effecting the conversion processing of the mask production data from the design data by this system will be explained with reference to the flowchart shown in FIG. 8.

The design pattern data (ex.GDS2) of the LSI is once converted to the internal format data inherent to the system in the layer unit. The internal format data is constituted in such a manner that it divides the design area of the LSI into several small areas for each layer and each small area so divided dispersedly has the graphic data, as will be described elsewhere. This small area is referred to as the "block", and a plurality of layers constituting one design data are all divided into the common blocks and are allocated to the processors such as the computers 4 and 5 in each block unit by the host computer 1.

Only necessary blocks are transferred to each computer 4, 5 or copied by the host computer 1 and parallel processing is effected in each block unit by each computer (see FIG. 7).

When the difference of performance exists between the host computer 1 and each computer 4, 5 connected to the network or between the processors of each computer 4, 5, the host computer 1 automatically allocates a block having a large load (a great amount of data) to a processor having high performance and a block having a small load to a processor having relatively low performance. When the number of blocks is greater than the number of processors, processing of a next block is allocated to the processor which finishes the processing of one block, and this operation is repeated until conversion processing of all the blocks is completed. In this way, high speed parallel processing is accomplished.

(See, col. 7, line 61 - col. 8, line 39 of '822).

The Examiner also asserts that col. 6, line 48 - col. 7, line 5 of '822 discloses, distributing the reference image to the image generation devices. This also does not appear to be correct. This portion of '822 particularly states:

As described above, when the graphic data distribution is known in advance such as in the case of the graphic data that have once been processed or in the case of the change of only a part of the graphic data such as the revision, the processing result information inside the block optimization condition file 100 can be as such applied. Because the judgement of the memory capacity of the processor by scanning becomes thus unnecessary, high speed conversion processing can be accomplished.

The processor used for the graphic data processing may be either one, or both, of a single processor and a multi-processor, and various apparatus constructions such as a stand-alone type, or parallel processing systems using a plurality of processors, can be employed. When the parallel processing is executed, it is possible to employ a loosely-coupled system, a tightly-coupled system of one multi-processor, or a massively parallel processor. The processors provided to the system may be only those of the servers and the hardwares, and the system can be constituted by an existing system construction.

Though the preferred embodiment of the present invention has been described about, the invention is not particularly limited thereto but can naturally be changed or modified in various ways without departing from the true spirit and

scope thereof.
(See, col. 6, line 48 - col. 7, line 5 of '822).

The Examiner also alleges that FIG. 10 and FIG. 12 of '822 disclose a display displaying the divided image and the reference image in the image generation devices. This also does not appear to be correct. The corresponding text of '822 particularly describes FIGS. 10 and 12 as providing explanatory view and states:

> ... FIG. 10 is an explanatory view when each block is extracted from the state shown in FIG. 9, FIG. 11 is an explanatory view showing an example of decomposition of polygonal graphic data to trapezoidal data, FIG. 12 is an explanatory view showing an example of library reference of the graphic data inside a block... .

(see, col. 7, lines 30-36 of '822).

> Besides the graphic data which each block directly has, the graphic patterns to which reference can be made repeatedly are stored in the library in the internal format. The library is global for the mask of one layer, and each block can look up the library reference data. An example of library reference of the graphic data inside the block is shown in FIG. 12.
>
> Each block divided by the block boundary line 12 described above has a margin set by a margin boundary line 13 having a predetermined width outside the block boundary line 12 with respect to another block, and an overlap area 14 is formed inside and outside the block boundary line 12 between the adjacent blocks. In this instance, the width of the margin formed in each block is set to a value greater than the absolute value of the sizing quantity of the figure.
>
> FIG. 10 shows the state where the blocks 1 to 4 equipped with the margin and divided by the block boundary line 12 shown in FIG. 9 are individually extracted. There is the case, at the time of block division, where a certain trapezoidal group exploded from one polygon is divided in such a manner as to bridge over a plurality of blocks while exceeding the overlap area 14 by the margin, as in the case of the polygon e. The processing of the trapezoidal data existing in the overlap area is executed as the data of all the blocks sharing that area.

(see, col. 9, lines 26-50 of '822).

This portion of the text says nothing about displaying a reference image and a divided image portion. In contrast, this portion of the text describes and FIGS. 10 and 12 depict a memory arrangement for graphic data in a memory and is a virtual view of the data.

'240 does not address the information noted above missing from '822.

Therefore, it is submitted that claims 1-6, 29, 32 and 33 are distinguishable over '822 and '240.

REJECTION OF CLAIMS 8-22, 25, 27 and 30:

With respect to Group 2, particularly claim 11, the Examiner alleges that col. 6, line 48 - col. 7, line 5 of '822 discloses distributing time series data with the divided images and

processing the divided images with the time series data. This does not appear to be correct. This portion of '822 is shown above in the discussion of the Group 1 claims. This portion of the text says nothing about time series data.

'240 does not address the information noted above missing from '822.

It is submitted that the Group 2 claims are distinguishable over the prior art.

It is submitted that the invention of the claims distinguishes over the prior art and withdrawal of the rejection is requested.

REJECTION OF CLAIMS 15 and 16:

These claims, for example claim 15, call for distributing both a divided image divided into areas or portions and divided by layers. On page 6 of the Action, the Examiner noted that '822 "... distributes only a divided image" ... . The '240 reference does not discuss distributing layers and the Examiner did not provide comments concerning '822 or '240 distributing "layers" much less an image that has been divided into areas and layers.

It is submitted that the Group 3 claims are distinguishable over the cited references, thus withdrawal of the rejection is requested.

REJECTION OF CLAIMS 23, 24, 26, 28 and 31:

These claims, for example claim 23, emphasize transmitting the divided image upon request or at predetermined intervals. The Examiner discusses these claims on page 6 of the Action and provides no comments addressing these features of the claims. '822 and '240 do not address these features of the claims.

It is submitted that the Group 4 claims are distinguishable over the prior art, thus withdrawal of the rejection is requested.

DEPENDENT CLAIMS:

The dependent claims depend from the above-discussed independent claims and are patentable over the cited references for the reasons discussed above. The dependent claims also recite additional features not taught or suggested by the prior art. For example, claim 17 calls for distribution or outputting "a divided image in a difference data format". The cited references do not teach or suggest such. It is submitted that the dependent claims are independently patentable over the cited references.

It is submitted that the claims are not taught, disclosed or suggested by the prior art. The

claims are therefore in a condition suitable for allowance. An early Notice of Allowance is requested.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: _____9/3/9_____   By: _____

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